Sierra Nevada
Forest Protection Campaign

01506

JUL 0 1 1998

June 29, 1998

Mr. Rick Breitenbach
CALFED Bay/Delta Program
1416 Ninth Street, Suite 1155
Sacramento, CA 95814

Dear Mr. Breitenbach:

The Sierra Nevada Forest Protection Campaign is a coalition of environmental groups and individuals concerned about forest management activities on National Forest lands in the Sierra Nevada.

Our review of the CALFED Bay-Delta Draft Programmatic Environmental Impact Statement/Environmental Impact Report (DEIS/EIR) focuses on the proposed Watershed Management Strategy and more specifically, aspects relating directly to upper watershed management. Our comments should not be considered exhaustive. Many of our member groups are submitting comprehensive comments on other aspects of the DEIS/EIR.

We share the concern expressed in the program documents about the ecological health of the Bay-Delta system. Similarly, the ecological health of upper watershed systems has been impaired by past management activities. We seek the restoration of natural processes from the headwaters to the delta that are the foundation of healthy, fully functioning ecosystems.

Our concerns regarding the DEIS/EIR are as follows.

1. The Watershed Management Strategy lacks sufficient detail to complete a thorough evaluation of the strategy. The technical appendix on watershed management provides a simple outline of the proposed strategy with few details on organization and implementation. A new watershed management entity is proposed with four organizational options offered. The expected relationships and responsibilities between cooperating agencies and other stakeholders have not been defined. The lack of details makes it impossible to evaluate the efficacy of the strategy.

The relationship between the Watershed Management Strategy and the Ecosystem Restoration Program is not clear. Are these separate programs or is one intended to oversee the other?

128 J Street - 2nd Floor • Sacramento, CA 95814 • (916) 442-3155 ext. 206 • FAX: (916) 442-3396 • sierra_campaign@friendsoftheriver.org

2. The benefit to the upper watershed from proposed solutions to problems in the lower watershed is arguable. The upper watershed area is viewed as the solution space for problems originating in the lower watershed. For example, logging conifers to improve water yield is included in the vision for upper watershed processes. Increasing water yield is a goal for lower watershed beneficiaries, but the benefit to upper watershed health is not clear. We have no evidence that the current yield of water is less than desirable for a healthy and fully functioning ecosystem in the upper watershed.

Furthermore, the ability to deliver increased water yields through logging that benefits the upper watershed is questionable. Marvin (1996) evaluated the results of 31 catchment studies and designed a model to predict increase in water yield resulting from vegetation removal. She concluded that for areas of the Sierra Nevada that have exceptionally high mean annual precipitation (roughly equal to the lodgepole-red fir community) and dense forest cover:

> "very little of the increase in water yield from logging would occur during the growing season (May through November), when additional runoff is most needed."

And further that the:

> "Value of streamflow augmentation is temptingly great in dry regions of the Sierra Nevada, but the most drastic, permanent reductions in forest cover would be required to convert a significant portion of precipitation to runoff in these areas. As in the rest of the Sierra Nevada, most of the increase would occur in winter or spring snowmelt peaks, when the monetary (which is greatest for hydroelectric power) and ecological values are lowest."

The physical situations were streamflow can be augmented in the Sierra Nevada are limited and the timing of any increase is not likely to be beneficial. Beyond this, it has not been demonstrated that the harvest prescriptions required to increase water yield would improve the health of the upper watershed ecosystem.

We suggest that instead of logging conifers to produce water, managing the upper watershed to maintain a fully functioning ecosystem will yield a quantity of water that is sustainable. This may not result in an increase in the water available, but it will improve the reliability of the water supply and avoid the redirection of impacts from one ecosystem to another.

3. The issue of avoiding the redirection of impacts from the lower watershed to the upper watershed has not been dealt with in sufficient detail. We agree that solutions to resource problems must not result in redirected negative impacts to other resource areas. There are clear statements in the *Program Goals and Objectives*, page 13, about avoiding the redirection of impacts; however, these statements are limited by

references to Bay-Delta system resources.

The *Watershed Management Strategy*, page A-5, states that restoration plans must not sacrifice one ecosystem for another. This concepts is essential to acceptable project planning and implementation. A discussion of this concept as it relates to the redirection of impacts from the lower watershed to the upper watershed must be included as a prominent section of the watershed strategy and not relegated to an appendix as it is presented currently. A process for accessing redirected impacts and establishing thresholds of significance must also be developed in the watershed strategy. This process must also include consideration of adverse cumulative impacts.

4. The importance of fire to the health and resilience of the upper watershed ecosystem is not adequately recognized in the DEIR/EIS. The plant communities of the Sierra Nevada are adapted to periodic, low intensity fire. Benefits from such a fire regime include nutrient cycling, increased nutrient availability, seed scarification, maintenance of species diversity, and increased fire resiliency through the removal of ladder fuels.

Mechanical treatments can be prescribed that mimic the effects of fire on the structural patterns of woody vegetation (Centers for Water and Wildland Resources 1996). However, we have little understanding about how to mimic the ecological functions (e.g. nutrient cycling) of fire. Because fire is a natural process that directly benefits the Sierra Nevada ecosystem in ways that mechanical treatments can not, the application of prescribed natural and ignited fire is essential to maintaining the health of the upper watershed ecosystem. We believe that prescribed natural and ignited fire should be utilized to the maximum extent feasible while protecting property, air quality, and other resource values.

In the *Ecosystem Restoration Program Plan,* Volume I (page 67), the vision for the upper watershed emphasizes the reduction of wildfire. This emphasis should more appropriately be placed on the reduction of catastrophic wildfire, that is wildfire which is of high intensity and extensive in area of coverage. Wildfire that approximates pre-European contact regimes are for the reasons stated above beneficial to the ecosystem. In following with the importance of reintroducing periodic, low intensity fire into upper watershed ecosystems, expanding the application of prescribed ignited fire should be included under the section "Implementation Objective, Targets, and Programmatic Actions" (*Ecosystem Restoration Program Plan,* Volume I, page 70).

We agree that a viable market for small trees and other biomass materials is important to implementing a successful fuels management program. Of equal importance to future fuels management programs is increased coordination between

C-013891

agencies monitoring air quality and those implementing prescribed burn programs. A well organized program to permit and monitor the effects of prescribed burning on regional air quality will maximize the ability to complete burn plans that meet air quality expectations.

5. Upper watershed targets emphasize fuel reduction and improved road building/maintenance and neglect other practices that contribute to a healthy and resilient ecosystem in the upper watershed. Limiting the creation of new roads in areas of low road density, removing existing roads and restoring the site to natural conditions, and managing vegetation to produce a forest structure of large, fire adapted trees that are resilient to catastrophic fire are actions that contribute to the health of the upper watershed. Other examples of practices that address protecting the health of riparian areas and the proper functioning of stream courses include requiring that development be setback from streams and minimizing the paved surfaces associated with development in the upper watershed. The results of these actions also would meet many of the implementation objectives presented in *Ecosystem Restoration Program Plan*, Volume II.

The targets identified in the *Ecosystem Restoration Program Plan*, Volumes I and II, focus on narrowly defined practices to improve the health of the ecosystem and are unnecessarily limiting.

6. Suggesting the creation of an extensive system of fuel breaks as a "general programmatic action" to reduce the risk of catastrophic fire is inappropriate. Fuelbreaks have been used with varying success to control wildfire (Green 1977). Lack of effectiveness of these breaks has been attributed to high fuel loads on adjacent lands, inadequate widths, poor maintenance, and the perception that the fuelbreak is a stand alone measure to manage fire. Weatherspoon and Skinner (1996) proposed the use of "defensible fuel profile zones" (DFPZ) as one component of a longer term strategy to address fire management and the reduction of catastrophic fire across the landscape. To date, the success of DFPZs to effectively control wildfire has not been tested.

Finney et al. (1997) suggest that areas treated with commercial thinning and slash and surface fuel reduction in a dispersed pattern could be more flexible in limiting the spread of fires relative to DFPZs. These researchers suggest:

> "Assuming that dispersed- and network- type fuel arrangements occupy the same fraction of the landscape, dispersed patterns can have shorter distances between the treatments. This increases the amount of treated area encountered at a given time by random fire on the landscape. Proximity then becomes important because weather conditions typically determine when suppression

C-013892

> efforts become effective on large fires and consequently where the fire front is located on a landscape at that time. By increasing the proximity of many treatment units to the fire, the dispersed pattern offers a spatial flexibility for opportunistic use by fire suppression crews. ... By contrast, the greater chance of weather affecting a fire somewhere between widely spaced fuel breaks means it must be controlled directly without the benefit of treatments or indirectly with large burnout operations."

Finney et al. (1997) conclude by indicating that additional research is necessary to assess the effectiveness of the many spatial arrangements of fuel treatments and their maintenance.

As is clear from the discussion in Weatherspoon and Skinner (1996) and Finney et al. (1997), our knowledge of the efficacy of linear fuelbreaks or DFPZs is incomplete. As such, to identify fuel breaks as a programmatic action for the Ecosystem Restoration Program is inappropriate. The programmatic action described on in *Ecosystem Restoration Program Plan, Volume I*, page 71, should be changed to eliminate reference to fuel breaks. This will allow the flexibility needed to design a strategy to reduce the risk of catastrophic wildfire and increase the ability to control wildfire without directing project participants towards specific management activities.

Conclusion

We appreciate the efforts of those involved in the CALFED planning process to initiate a process for restoration in the upper watershed area of the Bay-Delta system. Aquatic and terrestrial systems in the upper watershed are currently impaired as a result of poor land management practices. The opportunity to remedy this situation is through well planned and informed watershed management in which the achievement of a healthy, fully functioning ecosystem is the short and long term goal.

Thank you for the opportunity to review the DEIR/EIS. We look forward to reviewing the revised draft in the Fall 1998.

Sincerely,

Scott Hoffman Black FOR BOTH

Susan Britting, Ph.D.
PO Box 377
Coloma, CA 95613
(530) 333-2679 phone, 333-9178 fax
britting@innercite.com

Scott Hoffman Black
128 J. Street 2nd Floor
Sacramento, CA 95814
(916)442-3155 ex. 206, 442-3396 fax
sierra_campaign@friendsoftheriver.org

C-013893

References Cited

Centers for Water and Wildland Resources 1996. Summary of the Sierra Nevada ecosystem project report. University of California, Davis.

Finney, M.A., Sapsis, D. B., and Bahro, B. 1997. Use of FARSITE for simulating fire suppression and analyzing fuel treatment economics. Fire in California Ecosystems: Integrating Ecology, Prevention, and Management, November 1997, San Diego, CA. Symposium paper.

Green, L. G. 1977. Fuelbreaks and other fuel modification for wildland fire control. Agricultural Handbook 499. U.S. Forest Service, Washington, D.C.

Marvin, S. 1996. Possible changes in water yield and peak flows in response to forest management. Sierra Nevada Ecosystem Project, Final Report to Congress, vol. III, Assessments, Commissioned Reports, and Background Information. Centers for Water and Wildland Resource, University of California, Davis.

Weatherspoon, C. P. and Skinner, C. N. 1996. Landscape-level strategies for forest fuel management. Sierra Nevada Ecosystem Project, Final Report to Congress, vol. II, Assessments and Scientific Basis for Management Options. Centers for Water and Wildland Resource, University of California, Davis.

JUL 0 1 1998

EUGENE OR JUN 29 1998 POSTAGE .01 PB METER 6753871

Sierra Nevada
Forest Protection Campaign
128 J Street - 2nd Floor
Sacramento, CA 95814

MR. RICK BREITENBACH
CALFED Bay/Delta Program
1416 Ninth Street, Suite 1155
Sacramento, CA 95814

C-013895

C—013895